Highlights

This issue of the *Natural Gas Monthly* contains estimates of natural gas data through October 2000 for many data series at the national level. National-level natural gas prices are available through June, July, or September, depending on the price series. Also, State-level data are generally available through July 2000.

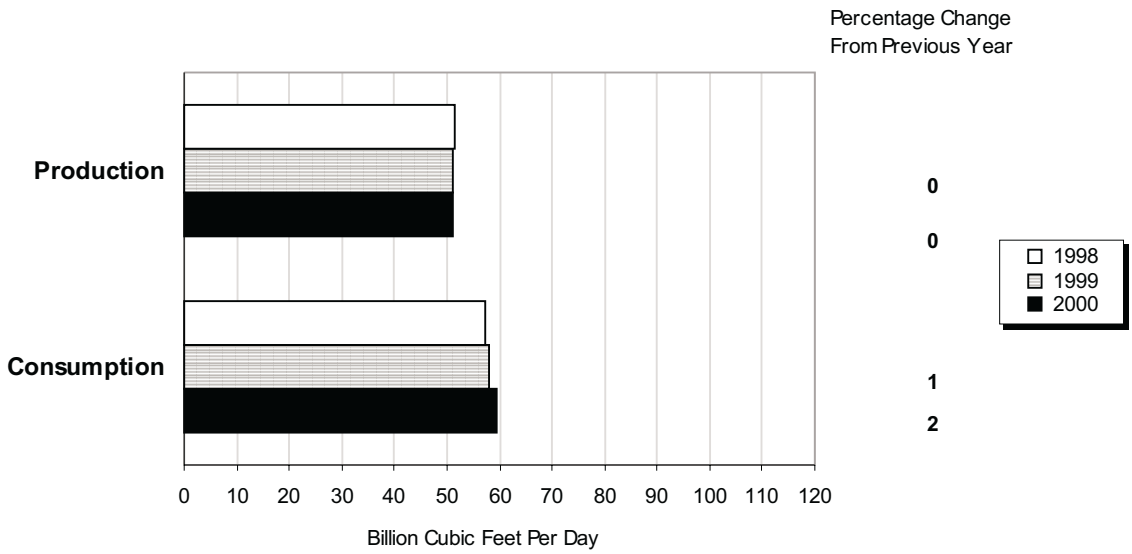
Highlights of the most recent data estimates contained in this issue are:

- The amount of working gas in underground storage at the end of October 2000, in place for the beginning of the heating season on November 1, is 2,757 billion cubic feet**,** 8 percent lower than the average for the previous 5 years.
- The average natural gas wellhead price from January through September 2000 is $3.07 per thousand cubic feet, more than $1 higher than for the same period in 1999.
- Cumulative dry natural gas production from January through October 2000 is nearly the same as in 1999.
- Cumulative end-use natural gas consumption through October 2000 is running 2 percent ahead of consumption during 1999.

Supply

Dry natural gas production from January through October 2000 is estimated to be 15,590 billion cubic feet or 51.1 billion cubic feet per day (Figure HI1). As winter approaches, production has been nearly the same as last year when the daily rate through October 1999 was 51.3 billion cubic feet. For the

Figure HI1. Average Daily Rate of Natural Gas Production and Consumption, January-October, 1998-2000



Source: Table 2.

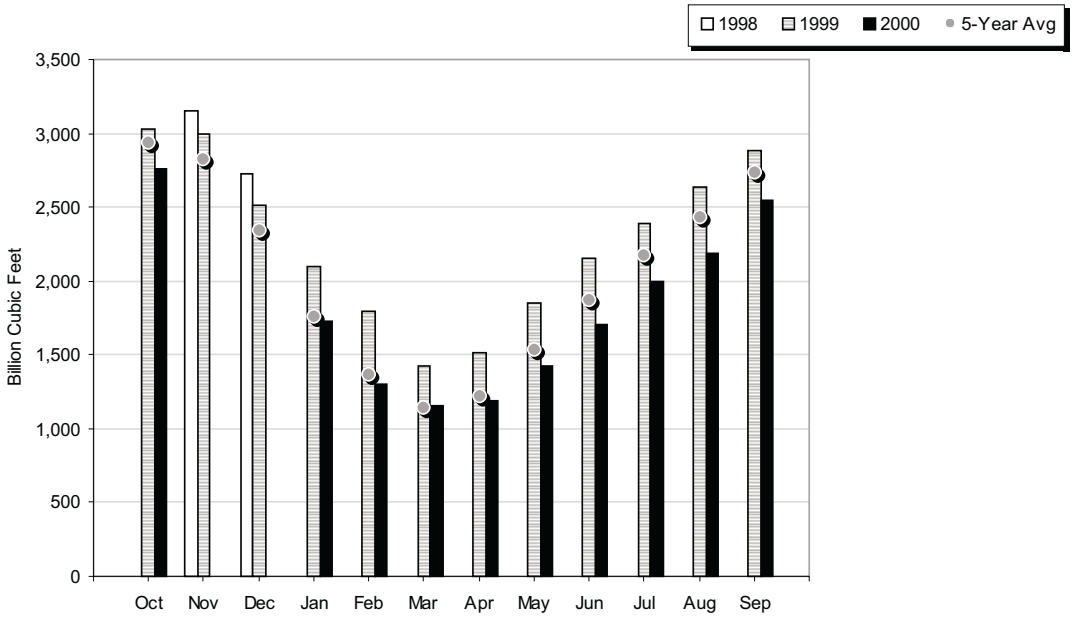
month of October 2000, production is 1,592 billion cubic feet or 51.4 billion cubic feet per day, a 1-percent increase over the daily rate during September 2000 (Table 1).

Net imports from January through October 2000 are estimated to be 2,852 billion cubic feet, 24 billion cubic feet (less than 1 percent) higher than for the same period last year (Table 2). Net imports for the month of October are estimated to be 284 billion cubic feet, 3 percent less than the 294 billion cubic feet in October 1999. The daily rate for October 2000 is 9.2 billion cubic feet, which is 5 percent below the daily rate of 9.7 billion cubic feet in September 2000.

U.S. import and export data by type and country are available through August 2000. Imports of liquefied natural gas (LNG) account for 5 percent of total imports as estimated for January through August 2000, compared with 4 percent in 1999. Cumulative U.S. exports from January through August 2000 are estimated to be 152 billion cubic feet, with 43 percent exported to Mexico via pipeline and the remaining volume exported nearly equally to Canada via pipeline and to Japan via tanker as LNG. Cumulative U.S. exports have increased 43 percent over exports during the same period in 1999, in part, as a result of electric utility demand in northern Mexico.

Storage plays a critical role in meeting winter demand. At the start of the 2000-2001 heating season on November 1, total working gas in underground storage is estimated to be 2,757 billion cubic feet, 8 percent below the 5- year average (1995-1999) for the beginning of the heating season (2,982 billion cubic feet) (Figure HI2 and Table 10). Even with this lower level of working gas, the amount in storage seems more than adequate to meet demand this winter given the average net withdrawals that have occurred during the past 5 winters. According to regional data, the East is particularly well positioned for the winter having reached 1,763 billion cubic feet of working gas in storage as of October 27, only 3 percent lower than the 5-year average for the region.[1]

Figure HI2. Working Gas in Underground Storage in the United States, 1998-2000



Note: The 5-year average is calculated using the latest available monthly data. For example, the December average is calculated from December storage levels for 1995 to 1999 while the January average is calculated from January levels for 1996 to 2000. Data are reported as of the end of the month, thus October data represent the beginning of the heating season.

Source: Form EIA-191, "Underground Natural Gas Storage Report," Form EIA-176, "Annual Report of Natural and Supplemental Gas Supply and Disposition," and Short-Term Integrated Forecasting System.

1 State-level storage data from Table 14 are extended using regional data from the American Gas Association to provide more up-to-date estimates of storage information. See the Energy Information Administration's *Weekly Natural Gas Market Update*. http://www.eia.doe.gov (November 6, 2000).

End-Use Consumption

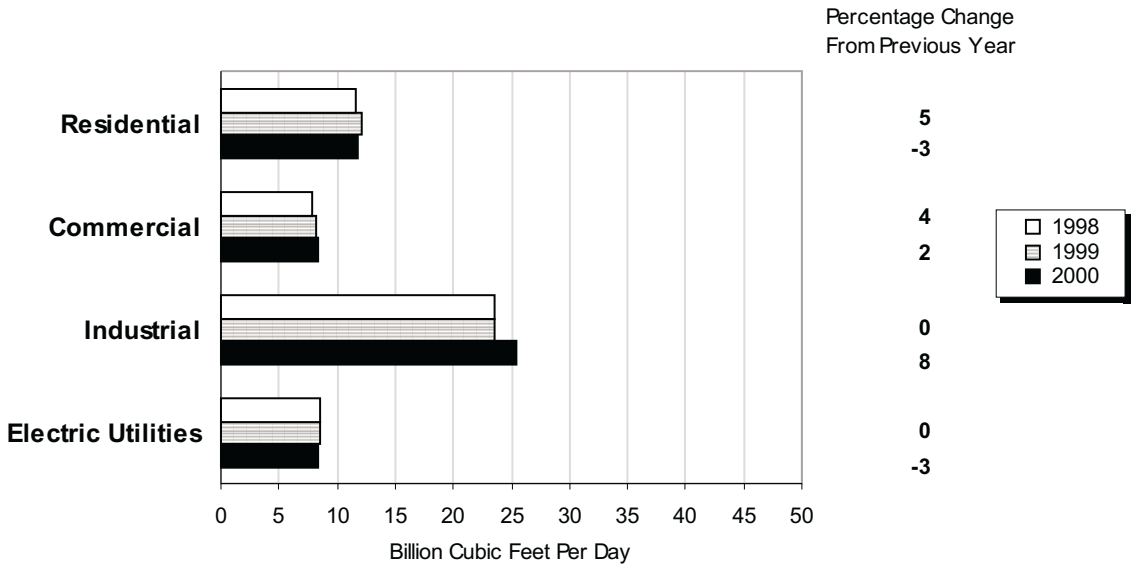
Cumulative end-use consumption of natural gas for January through October 2000 is estimated to be 16,535 billion cubic feet or 54.2 billion cubic feet per day, 2 percent above the daily rate for the same period of 1999 (Table 3). The increase is largely driven by growth in the industrial sector.

Industrial natural gas consumption through October 2000 is estimated to be 7,731 billion cubic feet or 25.3 billion cubic feet per day. This is 8 percent above the daily rate for the same period of 1999 (Figure HI3). Industrial consumption so far in 2000 has been higher in every month compared with that of 1999. Consumption estimates for April through August are 10 to 15 percent higher than in the corresponding months of 1999. Generally, the increase in industrial consumption may reflect increases in gas used in manufacturing processes as well as gas used by nonutility generators. As the restructuring of the electric utility industry proceeds, many previously regulated generating plants have been sold to entities that are not regulated utilities. These facilities are classified as nonutility generators, and the gas that they consume is reported as industrial consumption rather than electric utility consumption.

Estimates of natural gas consumption in the residential and commercial sectors for January through October 2000 are both within 2 percent of the 1999 levels, but are moving in opposite directions. Cumulative residential consumption is estimated to be 3,598 billion cubic feet or 11.8 billion cubic feet per day. This rate is 2 percent below that of 1999. Residential users have been consuming less natural gas in every month thus far in 2000 compared with 1999 except for February. In the commercial sector, cumulative consumption through October 2000 is estimated to be 2,530 billion cubic feet or 8.2 billion cubic feet per day. This rate is 2 percent higher than in 1999 for the same period. Most of the growth occurred during May through July when commercial consumption was 13 to 20 percent higher than in 1999.

Data for natural gas consumption by electric utilities are available through July 2000. Cumulative consumption in this sector is estimated to be 1,765 billion cubic feet or 8.3 billion cubic feet per day. For any particular month in 2000, electric utility consumption has been anywhere from 16 percent lower to 14 percent higher than in the corresponding month of 1999. The cumulative daily average consumption rate is 2 percent lower compared with the rate through July1999.

Figure HI3. Average Daily Rate of Natural Gas Deliveries to Consumers, January-October, 1998-2000



Note: Electric utilities reflect deliveries for January-July.
Source: Table 3.

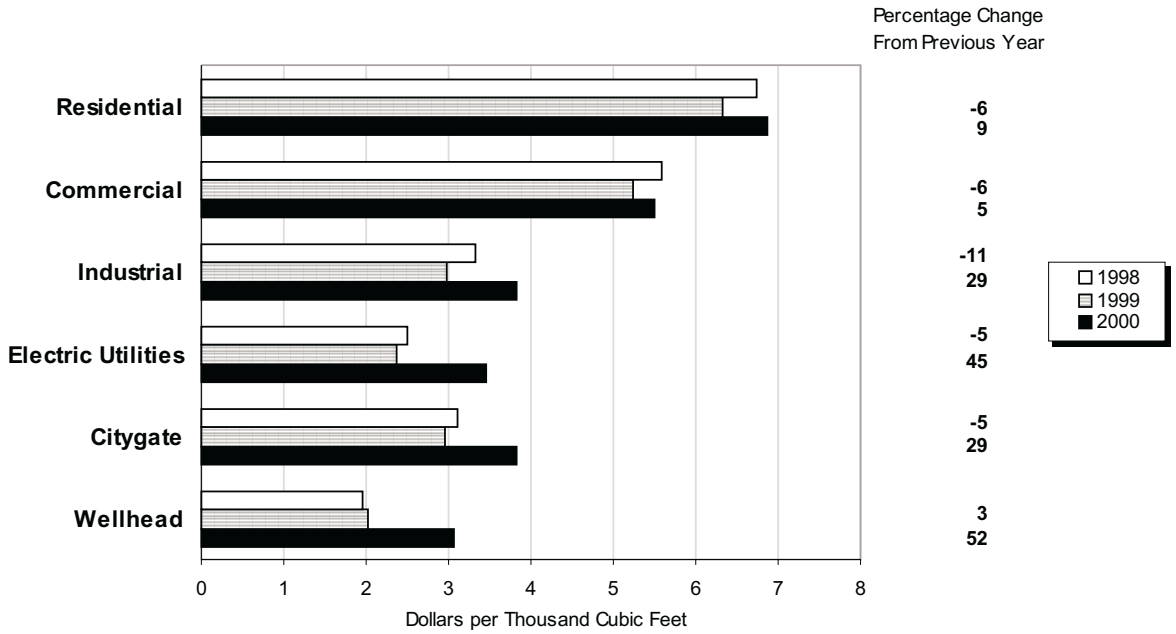
Prices

The average natural gas wellhead price for the first three-quarters of 2000 is estimated to be $3.07 per thousand cubic feet, 52 percent higher than the average of $2.02 for the same period in 1999 (Table 4 and Figure HI4). Storage levels that have lagged those of recent years and predictions of a return to normal weather for the 2000-2001 winter have contributed to the climb in the wellhead price this year. After 2 months of slight declines, the average wellhead price rose sharply to an estimated $4.26 per thousand cubic feet in September 2000. This is 16 percent higher than the estimate for August 2000 and 76 percent higher than in September 1999.

In the futures market, the settlement price on the near-month futures contract (November) at the Henry Hub reached an historic high of $5.630 per million Btu on October 12, and then entered the longest period of sustained decline since this past summer (Figure HI5). The November contract closed at $4.541 per million Btu on October 27, more than $1 below its peak. Factors influencing the decline include the generally mild weather during October that allowed higher-than-expected net injections into storage during the middle 2 weeks of the month.[2] Still, the closing price for the November 2000 contract is substantially higher than that of the November 1999 contract, which closed at $3.092 per million Btu..

Estimates of cumulative average prices[3] paid for natural gas by end users in 2000 are all higher than in 1999. The average prices paid by residential and commercial users for January through July 2000 are $6.88 and $5.49 per thousand cubic feet, respectively. For

Figure HI4. Average Delivered and Wellhead Natural Gas Prices, January-July, 1998-2000



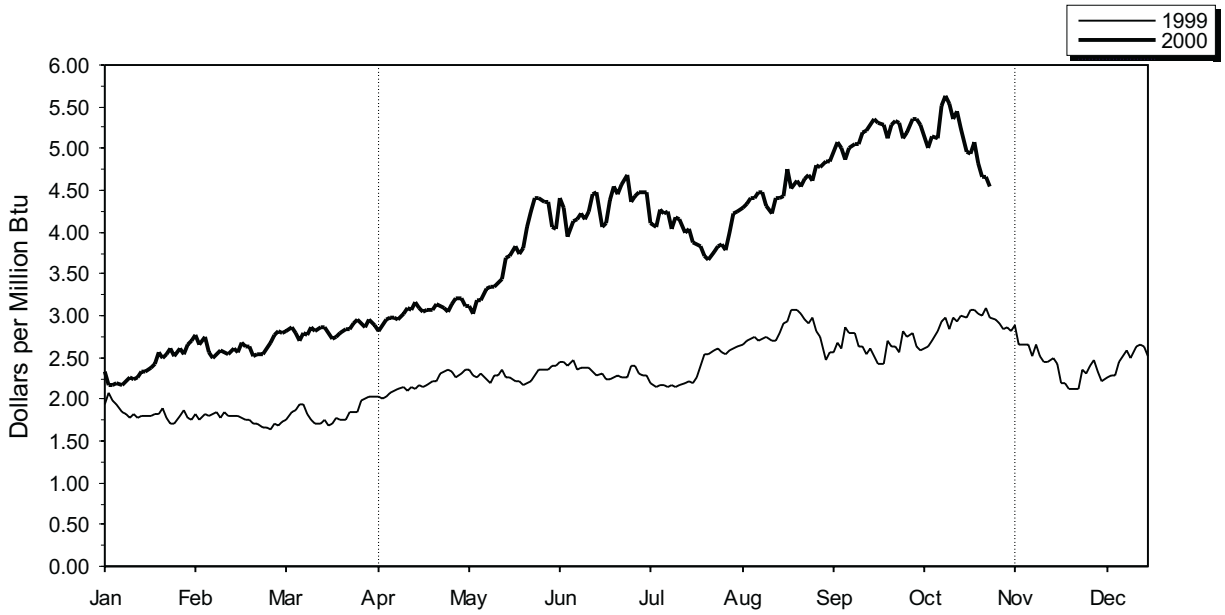
Note: Commercial and industrial average prices reflect onsystem sales only. The reporting of wellhead prices is 2 months ahead of the reporting of city gate, residential, commercial, and industrial prices. The reporting of electric utility prices is 1 month behind the reporting of city gate, residential, commercial, and industrial prices.

Source: Table 4.

2 Weekly estimates of storage activity are provided by the American Gas Association and used in the Energy Information Administration publication, *Weekly Natural Gas Market Update*. http://www.eia.doe.gov (October 30, 2000).

3 End-use prices in the residential, commercial, and industrial sectors are for onsystem gas sales only. While monthly onsystem sales are nearly 100 percent of residential deliveries, in 2000 they have averaged 65 percent of commercial deliveries and only 16 percent of industrial deliveries (Table 4).

Figure HI5. Daily Futures Settlement Prices at the Henry Hub



residential users, this is an increase of $0.55 per thousand cubic feet or 9 percent compared with 1999. For commercial users, it is an increase of $0.26 per thousand cubic feet or 5 percent.

The wellhead price constitutes a larger portion of the price paid for natural gas in the industrial and electric utility sectors compared with that of the residential and commercial sectors. Thus, the rising wellhead prices are having a greater direct impact on industrial and electric utility prices. The cumulative average price paid for natural gas by industrial users for January through July 2000 is $3.83 per thousand cubic feet, $0.85 per thousand cubic feet or 29 percent higher than during the same period last year. Data on electric utility prices lag those of the other sectors by 1 month. The cumulative average price paid for natural gas by electric utilities for January through June 2000 is $3.45 per thousand cubic feet, $1.01 per thousand cubic feet or 45 percent higher than during the same period in 1999.